

APR 11 2007

Appln. Serial No. 09/752,994

Attorney's Docket No. 42390P10364

Reply to non-final office action mailed on January 11, 2007

AMENDMENTS TO THE CLAIMS**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method comprising:

creating a rule-based grammar having a wildcard identifier in place of a predefined category of words;

defining rules to produce artificial combinations of unique sounds in a language, where each artificial combination represents a pronunciation of the words in the predefined category, and represents a generic word that is defined in a speech engine's vocabulary database;

generating a set of artificial combinations of unique sounds by substituting the wildcard identifier with the rules; and

in response to human speech specifying a wildcard word, determining a set of potential words spoken by the user by finding the generic words and non-generic words that phonetically match the wildcard word, wherein the non-generic words are not part of the rule-based grammar, assigning each of the generic and non-generic words a confidence level based on a set of rules followed by the speech engine, wherein the generic and non-generic words that are part of a particular application are assigned a higher confidence level than the generic and non-generic words that are not part of the particular application, removing the generic words from the set of potential words spoken by the user, and selecting a remaining non-

Appln. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007

generic word from the set of potential words spoken by the user having a highest confidence level.

2. (Original) The method of claim 1, wherein the rule-based grammar comprises a context-free grammar (CFG).

3. (Canceled).

4. (Original) The method of claim 1, wherein a unique sound in a language comprises a phoneme.

5. (Original) The method of claim 1, wherein said generating a set of artificial combinations of unique sounds by substituting the wildcard identifier with the rules comprises converting the wildcard rule-based grammar into a standard rule-based grammar.

6. (Previously Presented) A method comprising:

specifying a wildcard context-free grammar (CFG) which includes a wildcard identifier in place of a predefined category of words, each of which are defined in the speech engine's vocabulary database;

specifying a set of rules that define artificial combinations of unique sounds in a language, where each artificial combination represents a pronunciation of the words in the predefined category, and corresponds to a generic word that is defined in a speech engine's

Appln. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007

vocabulary database;

converting the wildcard CFG file into a recognized CFG grammar file by generating a set of artificial combinations of unique sounds based on the rules; and

in response to human speech having one or more spoken units, generating a results object having a number of generic words corresponding to artificial combinations appropriate to a given spoken unit, and having a number of non-generic words in the speech engine's vocabulary database appropriate to a given spoken unit, wherein the non-generic words are not part of the CFG, each generic word and non-generic word having an associated confidence level based on a set of rules followed by the speech engine, wherein the generic and non-generic words that are part of a particular application are associated with a higher confidence level than the generic and non-generic words that are not part of the particular application, removing the generic words from the results object, and selecting a remaining non-generic word from the results object having a highest confidence level.

7. (Original) The method of claim 6, additionally comprising querying the results object for a word having the highest confidence level in the speech engine's vocabulary database.

8. (Original) The method of claim 6, wherein a unique sound in a language comprises a phoneme.

9. (Currently Amended) A tangible machine-readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by

Appln. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007

a processor, cause the processor to perform the following:

create a rule-based grammar having a wildcard identifier in place of a predefined category of words;

define rules to produce artificial combinations of unique sounds in a language, where each artificial combination represents a pronunciation of the words in the predefined category, and represents a generic word that is defined in a speech engine's vocabulary database;

generate a set of artificial combinations of unique sounds by substituting the wildcard identifier with the rules; and

in response to human speech specifying a wildcard word, determine a set of potential words spoken by the user by finding the generic words and non-generic words that phonetically match the wildcard word, wherein the non-generic words are not part of the rule-based grammar, assigning each of the generic and non-generic words a confidence level based on a set of rules followed by the speech engine, wherein the generic and non-generic words that are part of a particular application are assigned a higher confidence level than the generic and non-generic words that are not part of the particular application, removing the generic words from the set of potential words spoken by the user, and selecting a remaining non-generic word from the set of potential words spoken by the user having a highest confidence level.

10. (Currently Amended) The tangible machine-readable medium of claim 9, wherein the rule-based grammar comprises a context-free grammar (CFG).

Appln. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007

11. (Currently Amended) The tangible machine-readable medium of claim 9, wherein a unique sound in a language comprises a phoneme.

12. (Previously Presented) An apparatus comprising: at least one processor; and a machine-readable medium having instructions encoded thereon, which when executed by the processor, are capable of directing the processor to:

create a rule-based grammar having a wildcard identifier in place of a predefined category of words;

define rules to produce artificial combinations of unique sounds in a language, where each artificial combination represents a pronunciation of the words in the predefined category, and represents a generic word that is defined in a speech engine's vocabulary database;

generate a set of artificial combinations of unique sounds by substituting the wildcard identifier with the rules; and

in response to human speech specifying a wildcard word, determine a set of potential words spoken by the user by finding the generic words and non-generic words that phonetically match the wildcard word, wherein the non-generic words are not part of the rule-based grammar, assigning each of the generic and non-generic words a confidence level based on a set of rules followed by the speech engine, wherein the generic and non-generic words that are part of a particular application are assigned a higher confidence level than the generic and non-generic words that are not part of the particular application, removing the generic words from the set of potential words spoken by the user, and selecting a remaining non-generic word from the set of potential words spoken by the user having a highest confidence

Appln. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007

level.

13. (Original) The apparatus of claim 12, wherein the rule-based grammar comprises a context-free grammar (CFG).

14. (Original) The apparatus of claim 12, wherein a unique sound in a language comprises a phoneme.

15. (Previously Presented) An apparatus comprising:

means for creating a rule-based grammar having a wildcard identifier in place of a predefined category of words;

means for defining rules to produce artificial combinations of unique sounds in a language, where each artificial combination represents a pronunciation of the words in the predefined category, and represents a generic word that is defined in a speech engine's vocabulary database;

means for generating a set of artificial combinations of unique sounds by substituting the wildcard identifier with the rules; and

in response to human speech specifying a wildcard word, means for determining a set of potential words spoken by the user by finding the generic words and non-generic words that phonetically match the wildcard word, wherein the non-generic words are not part of the rule-based grammar, assigning each of the generic and non-generic words a confidence level based on a set of rules followed by the speech engine, wherein the generic and non-generic

**Appln. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007**

words that are part of a particular application are assigned a higher confidence level than the generic and non-generic words that are not part of the particular application, removing the generic words from the set of potential words spoken by the user, and selecting a remaining non-generic word from the set of potential words spoken by the user having a highest confidence level.

16. (Original) The apparatus of claim 15, wherein the rule-based grammar comprises a context-free grammar (CFG).

17. (Original) The apparatus of claim 15, wherein a unique sound in a language comprises a phoneme.

18. (Previously Presented) A system comprising:

a conversion module to accept a wildcard rule-based grammar file as input, wherein the rule-based grammar has a wildcard identifier in place of a predefined category of words, wherein the rule-based grammar defines rules to produce artificial combinations of unique sounds in a language, and to convert the wildcard rule-based grammar file to a set of artificial combinations of unique sounds in a language by substituting the wildcard identifier with the rules;

a speech engine to accept human speech having a wildcard word as input, and to determine a set of potential words matching the wildcard word, the set of potential words comprising a number of generic words and non-generic words corresponding to the artificial

Appn. Serial No. 09/752,994
Attorney's Docket No. 42390P10364
Reply to non-final office action mailed on January 11, 2007

combinations of unique sounds in a language, wherein the non-generic words are not part of the rule-based grammar; and

a speech adapter to interact with the speech engine by querying the speech engine for potential words matching the wildcard word, wherein each of the generic and non-generic words are assigned a confidence level based on a set of rules followed by the speech engine, wherein the generic and non-generic words that are part of a particular application are assigned a higher confidence level than the generic and non-generic words that are not part of the particular application, wherein the generic words are removed from the set of potential words, wherein a remaining non-generic word from the set of potential words having a highest confidence level is selected, and returning the selected word which is most likely to match the wildcard word spoken by the user.

19. (Original) The system of claim 18, wherein the unique sounds in a language comprise phonemes.

20. (Original) The system of claim 18, wherein the rule-based grammar is a context-free grammar (CFG).

21. (Original) The system of claim 18, wherein the speech engine comprises the conversion module.